EXHIBIT 1

HIGHLY CONFIDENTIAL

1   IN THE UNITED STATES DISTRICT COURT

                FOR THE DISTRICT OF DELAWARE

2   _____

3   THOMSON REUTERS ENTERPRISE

     CENTRE GMBH and WEST

4   PUBLISHING CORPORATION,

5   Plaintiffs,

6   vs.   C.A. NO. 20-613-LPS

7   ROSS INTELLIGENCE INC.,

8   Defendant.

     _____

9

10

11   VIDEOTAPED VIDEOCONFERENCE DEPOSITION OF

12   ISABELLE MOULINIER, 30(b)(6) REPRESENTATIVE FOR

13   THOMSON REUTERS ENTERPRISE CENTRE GMBH

14   HIGHLY CONFIDENTIAL

15

16

17   DATE: July 1, 2022

18   TIME: 9:07 a.m.

19   PLACE: 150 South Fifth Street, Suite 1775

             Minneapolis, MN 55402

20

21   JOB NO.: SF 5264242

22

23

24

25   REPORTED BY: Dawn Workman Bounds, CSR

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 1                        I N D E X

 2   WITNESS:  ISABELLE MOULINIER                    PAGE

 3   EXAMINATION BY MR. RAMSEY.........................     5

 4   EXAMINATION BY MR. SIMMONS.......................   143

 5   EXHIBITS MARKED/REFERRED TO

 6   Exhibit 1   Defendant Ross Intelligence Inc.'s

                 Amended Notice of 30(b)(6) Deposition

 7               to Plaintiff Thomson Reuters Enterprise

                 Centre GMBH...............................     6

 8

     Exhibit 2   Master Thesis "Explaining Relationships

 9               Between Entities".........................    87

10   Exhibit 3   Dynamic_System_Overview.pdf...............   109

11

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15   TIME ON THE RECORD:

16   Mr. Ramsey - 3 hours, 8 minutes

     Mr. Simmons - 1 minute

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1   P R O C E E D I N G S

2   THE VIDEOGRAPHER: Good morning. We are

3   going on the record at 9:07 a.m. Central Daylight Time on

4   July 1, 2022. This is Media Unit Number 1 of the

5   video-recorded deposition of Isabelle Moulinier, taken by

6   counsel for defendant in the matter of Thomson Reuters

7   Enterprise, et al. versus Ross Intelligence Inc., filed

8   in the United States District Court for the District of

9   Delaware, Case Number 20-613-LPS.

10   This deposition is being taken in

11   Minneapolis, Minnesota. My name is Brian Ciccone

12   representing Veritext Legal Solutions, and I am the

13   videographer. The court reporter is Dawn Bounds also

14   from Veritext Legal Solutions.

15   Will the attorneys please note their

16   appearances for the record.

17   MR. RAMSEY: This is Gabriel Ramsey joined

18   by my colleague Kevin Cacabelos of Crowell & Moring. We

19   represent the Defendant Ross Intelligence.

20   MR. SIMMONS: I am Joshua Simmons. With

21   me is Roma Lopes. We're from Kirkland & Ellis, and we

22   represent the Plaintiffs as well as the witness.

23   THE VIDEOGRAPHER: Thank you.

24   Will the court reporter please swear in

25   the witness.

1   (Witness sworn.)

2   THE VIDEOGRAPHER: You may proceed.

3   ISABELLE MOULINIER,

4   having been first duly sworn, testified as follows:

5   EXAMINATION

6   BY MR. RAMSEY:

7   Q.   Good morning, Ms. Moulinier. Did I say that

8   right?

9   A.   Moulinier, yes.

10   Q.   Moulinier. Okay. Great.

11   In the ballpark.

12   Have you ever had your deposition taken

13   before?

14   A.   No.

15   Q.   You never -- okay. So your counsel's probably

16   given you the basics, and I'll kind of rep -- probably

17   repeat some of the points.

18   I'll be asking you questions, would

19   appreciate if you'd give me your best and most, you know,

20   full and complete answer to the best of your ability.

21   Can we agree on that?

22   A.   We can.

23   Q.   Okay. It's important -- obviously everything's

24   being taken down in a written form here, so it's

25   important that I not talk over you when you're finishing

                                             Page 5

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1   A.   I actually do not know.

2   Q.   Okay. All right.

3   A.   It's either West or Thomson Reuters.

4   Q.   Okay. Well, regardless, what is your current

5   title and role? Could you describe that.

6   A.   Yes. I am the VP of Applied Research for AI at

7   Thomson Reuters.

8   Q.   And how long have you been in that role?

9   A.   18 months.

10   Q.   When did you first begin working for West or

11   Thomson Reuters?

12   A.   1997.

13   Q.   All right. What was your first role with the

14   company?

15   A.   I was a research scientist in the group that I

16   now lead.

17   Q.   Okay. And how long did you -- if you could

18   just summarize starting in 1997, the basic course of your

19   roles over time at West.

20   A.   Okay. So from 1997 to 19 -- 2015, I was in a

21   group that at the time was called research and

22   development, and I continued a career from independent

23   contributor to a manager or people manager in the applied

24   research space.

25   In '15, I changed group to go to a product

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1   innovation group where we focused on new potential

2   products and new technologies. Then I left Thomson

3   Reuters in '17, went to work for a bank, and came back to

4   Thomson Reuters in 2020 -- December 2020.

5   Q.   Got it. So kind of looking back in time, did

6   you have involvement in the development of the Westlaw

7   Next product?

8   A.   Yes.

9   Q.   All right. About when did development of that

10   particular product begin to the best of your

11   recollection?

12   A.   I would say 2007, maybe a little bit earlier --

13   Q.   Okay.

14   A.   -- depending on what we consider the original

15   idea.

16   Q.   Okay. Do you happen to recall when that

17   product was released approximately?

18   A.   2010 or 2011.

19   Q.   Okay. I'll ask you the same question about the

20   Westlaw Edge product. Are you familiar with that?

21   A.   I am familiar with the product.

22   Q.   Okay. I mean, did you have involvement in work

23   on the Westlaw Edge product?

24   A.   I did not directly. My group did.

25   Q.   Okay. Do you have familiarity with the

Page 11

1   for me what is the -- what is the -- or what are the

2   content types that are returned in a WestSearch Plus

3   search?

4   A.   For WestSearch Plus, the only content is the

5   headnotes.

6   Q.   Okay. Does WestSearch Plus also suggest forms

7   of questions?

8   A.   There is a feature in Westlaw which suggests

9   questions or different types of contents, and that

10   feature is also used in order to serve as the questions

11   that people can use for WestSearch Plus.

12   Q.   Okay. Let's just look -- I just want to focus

13   a while on the - moving away from WestSearch Plus, we'll

14   come back to that - but the general Westlaw Edge search

15   functionality.

16   If you could just describe for me the

17   basic order of operations, at a high level, very high

18   level, of how a search in Westlaw Edge is processed, I

19   would appreciate it.

20   MR. SIMMONS: Objection, vague and

21   ambiguous.

22   A.   Are we -- yeah, can we narrow that down, the

23   question?

24   BY MR. RAMSEY:

25   Q.   Yeah. Let's just -- so let's just -- I'm going

1   written contract, I recall -- I mean I've done this -- I

2   recall seeing at the top of the user interface a very

3   short list of what I believe are headnotes, excerpts that

4   are returned, as well as a question.

5   And then in the bottom part of the user

6   interface, I see a list of cases, but it's case citations

7   with snippets associated with them.

8   Does that sound -- are you familiar with

9   the basic output of the Westlaw Edge search that I just

10 described?

11   MR. SIMMONS: Objection, incomplete

12 hypothetical.

13   A.   It does sound familiar.

14 BY MR. RAMSEY:

15   Q.   Okay. So when I type in my -- my question in

16 Westlaw Edge, is it accurate that for the top part of the

17 user interface results, that's generated using the

18 WestSearch Plus functionality, and for the bottom part of

19 the results in the user interface, that's the general

20 Westlaw Edge search functionality?

21   A.   Yes. Unless we are trying a new interface.

22   Q.   Okay.

23   A.   So if you see the question and answers below,

24 that would be WestSearch Plus. The result list would be

25 WestSearch.

1 case in the pool, and they're transformed into numerical

2 values, and those numerical values are combined in a

3 formula to give a score.

4   Q.   All right. I just -- I just want to be clear.

5   I asked some questions to Dr. Al-Kofahi a

6 couple of months ago. I think he -- I think he testified

7 that he did not believe learning-to-rank was used in the

8 context of Westlaw Edge, but it sounds like you believe

9 it is?

10   A.   Learning-to-rank was used in the content of

11 Westlaw Edge, yes.

12   Q.   Okay. All right. I just wanted to clarify

13 that.

14   Is there any particular learning-to-rank

15 algorithm that is utilized in Westlaw Edge general search

16 ranking?

17   A.   We've relied on two families of algorithm. I

18 am not sure which one is used for which anymore, because

19 we use the ranking function that came out on a day-to-day

20 basis, not the measuring any algorithm itself on a

21 regular basis.

22   Q.   I'm not sure I understood that.

23   So what do you mean by you -- you've used

24 the ranking function that came out on a day-to-day basis,

25 not the learning algorithm itself?

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1   A.   So in learning-to-rank, what you're doing is

2   you're trying to learn a ranking func -- a scoring

3   function or a ranking function based on data.

4   When you're going to run a search against

5   a search engine, it's done learning. It's just applying

6   the function. That's what I mean.

7   Q.   Okay. And so you said that there were two

8   learning-to-rank algorithms that were used in general.

9   Then --

10   A.   Yes.

11   Q.   -- describe those.

12   A.   So --

13   Sorry, I talked over.

14   Originally we used an approach called SVM,

15   support vector machine --

16   Q.   Okay.

17   A.   -- with a linear model. And we used something

18   which is called pairwise learning-to-rank.

19   Q.   Okay. So, again, just talking about Westlaw

20   Edge general search functionality. So did the

21   learning-to-rank algorithm change over time? Is that

22   what you're saying, or...

23   A.   It does not necessarily unless you retrain the

24   scoring function.

25   Q.   Did -- I mean, did that happen in the context

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1   of Westlaw Edge general search functionality?

2   A.   I don't recall.

3   Q.   Okay. You just note generally that those are

4   the two algorithms -- learning-to-rank algorithms that

5   were used at some point in time?

6   A.   That's the one that was one algorithm. The

7   other one that we used was based on logistic regression

8   in order to predict the rating that a document might have

9   for a specific query. And the regression coefficients

10   are what makes the scoring function based on feature

11   values.

12   Q.   Okay. I'm still not -- I thought you testified

13   that there were two different learning-to-rank

14   algorithms. If I misunderstood that, let me know. There

15   was support vector machine learning-to-rank algorithm.

16   And did you say that the pairwise

17   learning-to-rank algorithm was something separate or that

18   it's the same thing?

19   A.   No. The pairwise algorithm is a type of

20   support vector, much like learning-to-rank.

21   Q.   I see. Okay.

22   A.   The other one was this linear regression

23   or -- it's a generalized form of regression.

24   Q.   That is a dif -- regression functions are

25   different than the learning-to-rank algorithm though,

1   ambiguous.

2   A.   We will need to have access to what I call the

3   secondary database.   For instance, we do use key numbers,

4   and so we would need to know which headnotes have key

5   numbers and we'll use a similar secondary storage.

6   BY MR. RAMSEY:

7   Q.   I mean is -- and -- is the association of key

8   numbers through a secondary search similar to what we

9   discussed earlier with respect to Westlaw Edge search

10   generally?

11   A.   I can't recall.   It could be part as -- of the

12   index -- the new index that I mentioned as well.

13   Q.   Okay.   All right.   Well, let's -- we were just

14   about to get to scoring and ranking.   So let's move to

15   that topic.

16   We're talking about learning-to-rank.

17   Again, let's move back to Westlaw

18   Search -- Westlaw Edge search generally.

19   What features are extracted from a list of

20   candidate answers in order to serve as inputs in the

21   ranking process?

22   MR. SIMMONS: Objection, vague and

23   ambiguous.

24   A.   Well, we have over 40 features, if I recall

25   correctly.   Some of the features have to do with key

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1   numbers. Some of the features have to do with score or

2   rank in the search results -- in the initial search

3   results.

4   Some of the features have to do with the

5   citation network. And some of the features have to do

6   with some information about how often cases are viewed by

7   customers.

8   Q.   Okay. Are there any features that are just

9   related to term frequency or more general features simply

10   about the language itself?

11   MR. SIMMONS: Objection, compound.

12   A.   They are implicit features that are relating to

13   term frequency given that we use the information from the

14   initial searches.

15   BY MR. RAMSEY:

16   Q.   Okay. So I take it in the process of

17   developing West's ranking model, there was a training

18   process at some point?

19   MR. SIMMONS: Objection, foundation.

20   A.   Yes.

21   BY MR. RAMSEY:

22   Q.   Okay. And are you familiar with the training

23   process regarding -- as it relates to the ranking

24   algorithm used in Westlaw Edge search generally?

25   A.   Yes.

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1   Q.   Now, looking back in time, is -- how frequently

2   does training of the ranking algorithm occur?

3   A.   Infrequently.

4   Q.   When was, to the best of your recollection, the

5   last time that the ranking algorithm was trained?

6   MR. SIMMONS: Objection, beyond the scope

7   of the 30(b)(6) deposition notice.

8   You can answer if you know.

9   A.   I'm aware of the last training that was done

10   for the release of Next, which would have been in '10 or

11   '11. I don't recall knowing about other training.

12   BY MR. RAMSEY:

13   Q.   Okay. And is the same ranking algorithm used

14   in Westlaw Edge to your understanding as was used in

15   Westlaw Next?

16   A.   That is my understanding.

17   Q.   Okay. And it's not -- the ranking algorithm in

18   the general Westlaw Edge search functionality has not

19   been retrained since that -- the training that you

20   mentioned changed in the time of Westlaw Next?

21   MR. SIMMONS: Objection, beyond the scope

22   of the 30(b)(6) deposition notice.

23   You may answer if you know.

24   A.   As I already answered, to the best of my

25   knowledge, I am not aware of retraining.

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1   BY MR. RAMSEY:

2   Q.   Okay. And did -- I'm not sure you said what

3   time frame that was.

4   You may have; and if I missed it, I'm

5   sorry.

6   About what year do you think that

7   happened, that training of the ranking algorithm?

8   A.   At the launch of Westlaw Next, which would be

9   in '10 or '11.

10   Q.   Okay.

11   A.   We might have retrained in '11. Bug fixes.

12   THE REPORTER: I'm sorry?

13   A.   Bug fixes. But not a formal full retraining.

14   BY MR. RAMSEY:

15   Q.   Okay. Just at a very high level, what is your

16   understanding of how that training process was carried

17   out?

18   A.   In order to carry out the training process, the

19   first step is to assemble training data. We had a team

20   of product managers who work on Westlaw as well as

21   contractors I believe identify legal topics based on

22   feedback from customers or other areas where you can

23   identify what a legal question might be.

24   They then created a list of documents -

25   cases in our case - that needed to be identified or

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1   returned as those are very responsive documents. Those

2   are responsive documents, those are okay documents to

3   show, and those are documents that we would -- don't want

4   to show.

5   So basically for each query or topic --

6   and we add a general topic as well as a smaller version

7   of the topic. We add a list of documents that add a

8   grade. We also add a list of key numbers that add a

9   grade so that we could identify that first element of

10   finding good key numbers.

11   Q.   Okay. So is it fair to say the training

12   process involved question and answer pairs?

13   A.   Question and document pairs.

14   Q.   Question and document pairs.

15   In determining what was a very good or a

16   good or a not relevant document response, was the

17   entirety of the document considered or only particular

18   portions?

19   A.   I don't have the answer to that question. That

20   would be for our product managers or the people that --

21   our subject matter experts. Let's call them subject

22   matter experts.

23   Q.   Okay.

24   A.   My understanding is they could use any

25   information they wanted for judging opinions that was

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1   contained in the opinion.

2   Q.   Okay. In identifying documents that were very

3   good or good or not good at all, do you know whether

4   the -- maybe you don't know -- whether the reviewers of a

5   potentially responsive document would, for example,

6   identify particular portions of texts that informed their

7   assessment of that document as an answer?

8   MR. SIMMONS: Objection, vague and

9   ambiguous.

10   A.   I don't know for sure. I would assume it was

11   an internal process for them to judge relevance, and

12   different subject matter experts might have different

13   processes.

14   BY MR. RAMSEY:

15   Q.   Okay. Do you know -- I mean, have you talked

16   with anybody on your team or otherwise about how -- what

17   material was used to determine whether a document was

18   very good or good or not good at all as an answer?

19   A.   I've talked to subject matter experts,

20   and it's -- they're all lawyers, and so it's their legal

21   experience and their legal experience in legal research

22   that was the driver for assigning those grades, if you

23   wish.

24   Q.   Okay. So in the training process of the

25   ranking algorithm for Westlaw Edge and Westlaw Next,

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1   where did -- where did the questions come from?

2   A.   So for Westlaw Edge, the questions came from

3   our subject matter experts. They may have used questions

4   that customers have shared with them or that other West

5   employee at the time, I guess, who have direct contact

6   with customers had shared with them.

7   Q.   I believe I've seen indications that query logs

8   in Westlaw were used as a source of questions. Does that

9   sound right?

10   MR. SIMMONS: Objection, foundation.

11   A.   So --

12   MR. SIMMONS: Beyond the scope of the

13 30(b)(6) deposition notice.

14   You can answer if you know.

15   A.   For Westlaw Edge, we had access to a list of

16 queries that was assembled by a person in our product

17 team.

18   For Westlaw Search Plus, we had access to

19 a similar list of queries that were posed by customers.

20 BY MR. RAMSEY:

21   Q.   Okay. In training the ranking algorithm in

22 Westlaw Search, were headnotes used as questions or

23 answers?

24   A.   I don't recall headnotes being used as

25 questions or answers for training Westlaw Next.

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1   The reason is that Westlaw Next was

2   focused on opinion, not on answers or headnotes.

3   Q.   And just to be clear, headnotes were not -- in

4   fact, headnotes were not used as questions or answers in

5   training any ranking algorithm for Westlaw Edge as well;

6   is that accurate?

7   MR. SIMMONS: Objection, mischarac --

8   BY MR. RAMSEY:

9   Q.   It can be general search functionality?

10   MR. SIMMONS: Objection, mischaracterizes

11 the witness's testimony.

12   You can answer.

13   A.   Given that my understanding is that Westlaw

14 Edge apart from WestSearch is Westlaw Next, then

15 headnotes would not be used to train the -- as training

16 data for the opinion search.

17 BY MR. RAMSEY:

18   Q.   Okay. Shifting gears to WestSearch Plus.

19   Are headnotes -- in training the ranking

20 algorithm for WestSearch Plus, were headnotes used as

21 questions or as answers?

22   A.   Yes, they are.

23   Q.   So, first, are headnotes used as questions in

24 training WestSearch Plus, or answers, or both?

25   MR. SIMMONS: Objection, compound; form.

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1   A.   Headnotes are not questions, so they are not

2   used as questions. However, they're the answers that we

3   want the system to provide, so they will be used as

4   answers to questions for training the system.

5   BY MR. RAMSEY:

6   Q.   And when was the last time that the ranking

7   algorithm was trained for WestSearch Plus, to your

8   recollection?

9   A.   Last year.

10   Q.   Okay. And is -- has the WestSearch Plus

11   ranking algorithm been trained frequently or

12   infrequently?

13   MR. SIMMONS: Objection, form; vague and

14   ambiguous.

15   A.   I know the feature was released in '18, and we

16   have a new version of the feature either this year for

17   release or trains at the end of last year. That would be

18   a frequency of three years.

19   BY MR. RAMSEY:

20   Q.   Okay. Has the rank -- the training process for

21   WestSearch Plus, has it changed at all over time or has

22   it remained the same?

23   A.   What do you mean?

24   Q.   Different sources of questions and answers, for

25   example?

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1   BY MR. RAMSEY:

2   Q.   All right. So just a quick question about --

3   about Exhibit 75 [sic]. Exhibit 75 you've been handed is

4   a master's thesis from the University of Amsterdam

5   entitled Explaining Relationships Between Entities.

6   Do you see that?

7   A.   I do see the title.

8   Q.   Okay. So you'll note that the date on the

9   front is November 2014.

10   Do you see that?

11   A.   Noted.

12   Q.   We don't have to go into the details. It's

13   just like a general question.

14   I think you testified earlier that the

15   training process of Westlaw search generally happened

16   prob -- it happened in 2010, I think you said, or '11.

17   A.   The last one.

18   Q.   Yeah. And you would agree that that -- that

19   training date is before the date of this November 2014

20   thesis?

21   A.   Yes.

22   Q.   All right. Do you have any -- or have you ever

23   seen this master's thesis before?

24   A.   I have not.

25   Q.   Okay. Do you have any reason to believe that

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1   Q.   Okay. So you think it was at some point

2   between 2007 and 2010 that West settled on the precise

3   learning-to-rank algorithm --

4   A.   Yes.

5   Q.   -- that is in production now?

6   A.   Yes.

7   Q.   Okay. But you weren't involved in that

8   selection process, or were you?

9   A.   I was.

10   Q.   And what do you recall about it, the selection

11   process of the precise learning-to-rank algorithm that is

12   used by West?

13   A.   Can you rephrase your question?

14   Q.   I'm just -- I'm trying to get your recollection

15   of any details that you remember about the work to choose

16   a particular -- the actual particular learning-to-rank

17   algorithm that is in use?

18   A.   So at the time there were only a few options,

19   to the best of my knowledge, especially if we wanted to

20   experiment in a rapid fashion and not have to reimplement

21   every aspect of the pipeline.

22   As a result, we identified SVM-Light as a

23   library that we could use and we started using SVM-Light

24   as our way of training Westlaw Edge search.

25   Q.   Okay. And just for the record, SVM-Light, how

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1   And so if we look for burden of proof as

2   part of our query, we will find that catch line as well

3   as the text of the headnotes.

4   Q.   I see. So when you -- when we're talking about

5   key numbers and searching the text of key numbers, it's

6   not just the number itself; it's the short descriptive

7   text --

8   A.   Correct.

9   Q.   -- that may be associated with it?

10   Thank you. That makes more sense.

11   Are key numbers used in the training of

12   the ranking algorithms?

13   MR. SIMMONS: Objection, vague and

14   ambiguous.

15   A.   Page 12, the document states that, "In

16   particular" -- at the bottom of the last paragraph: "In

17   particular, both question and answer candidate are run

18   through a key number classifier and the feature scoring

19   functions compare similarity between those outputs."

20   So based on what's in the document, key

21   numbers will be used as part of the scoring function.

22   BY MR. RAMSEY:

23   Q.   Okay. Do you know how -- so is it fair to say

24   key numbers are a form of feature that is --

25   MR. SIMMONS: Objection --

1   BY MR. RAMSEY:

2   Q.   -- utilized in the ranking process?

3   MR. SIMMONS: Objection, vague and

4   ambiguous.

5   A.   The document stated that the feature scoring

6   function compare the similarity between the key numbers.

7   So key numbers are part of the features or the similarity

8   between the key numbers is the actual feature.

9   BY MR. RAMSEY:

10   Q.   Do you have any knowledge about how key numbers

11 as a feature are weighted compared to other features?

12   A.   No. That would be learned through the learning

13 process.

14   Q.   But you don't know, for example, after the

15 training process has occurred, how heavily weighted key

16 numbers are versus other features?

17   A.   I don't recall.

18   Q.   Okay. Just in broad strokes, do you remember

19 among -- you said there was 40-some features that you

20 believe are used in the ranking process and in the

21 training process.

22   Are there any particularly important

23 features that you've discussed with your colleagues?

24   MR. SIMMONS: Objection, vague and

25 ambiguous.

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1   A.   So the 40-plus feature I mentioned are relating

2 to Westlaw Edge main search, not Westlaw Edge Search

3 Plus. In our discussion, at the time of the creation

4 algorithm, it was our common understanding that key

5 numbers were one of the more impactful features. Key

6 number and search the text of the document.

7 BY MR. RAMSEY:

8   Q.   Okay. And is it your view that key numbers as

9 a feature are one of the most impactful features both in

10 the context of Westlaw Edge Search functionality

11 generally and in the context of WestSearch Plus?

12   A.   I have not discussed the impact or importance

13 of key numbers in WestSearch Plus with my colleagues.

14   Q.   Okay. Putting aside key numbers, are there --

15 in the context of WestSearch Plus, are there -- have you

16 discussed what are particularly important features?

17   MR. SIMMONS: Objection, vague and

18 ambiguous.

19   A.   I have not discussed important features in

20 detail given that I was not at the company at the time of

21 the release of the feature, and I've not looked at the

22 latest -- I have not discussed the latest results either.

23 BY MR. RAMSEY:

24   Q.   Okay. Have you ever participated in -- in any

25 conferences or academic context like that where headnote

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 1                  REPORTER'S CERTIFICATE
 2    STATE  OF  MINNESOTA    )
                              ) ss.
 3    COUNTY OF  HENNEPIN     )
 4            I hereby certify that I reported the deposition
      of ISABELLE MOULINIER, 30(b)(6) REPRESENTATIVE FOR
 5    THOMSON REUTERS ENTERPRISE CENTRE GMBH, on the 1st day
      ofJuly, 2022, in Minneapolis, Minnesota, and that the
 6    witness was by me first duly sworn to tell the whole
      truth;
 7
              That the testimony was transcribed by me and is
 8    a true record of the testimony of the witness;
 9            That the cost of the original has been charged
      to the party who noticed the deposition, and that all
10    parties who ordered copies have been charged at the same
      rate for such copies;
11
              That I am not a relative or employee or
12    attorney or counsel of any of the parties, or a relative
      or employee of such attorney or counsel;
13
              That I am not financially interested in the
14    action and have no contract with the parties, attorneys,
      or persons with an interest in the action that affects or
15    has a substantial tendency to affect my impartiality;
16            That the right to read and sign the deposition
      by the witness was not waived.
17
              WITNESS MY HAND AND SEAL THIS 20th day of July,
18    2022.
19
20
21
22
23            Dawn Workman Bounds, CSR 6129
              Notary Public, Hennepin County, Minnesota
24            My commission expires January 31, 2024
25

                                              Page 144
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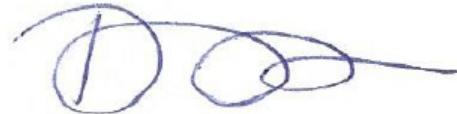
**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

THOMSON REUTERS ENTERPRISE CENTRE GMBH and WEST PUBLISHING CORPORATION,	C.A. No. 20-613-SB
Plaintiffs, Counterdefendants,	
v.	
ROSS INTELLIGENCE INC.,	
Defendant, Counterclaimant.	

**PLAINTIFFS THOMSON REUTERS ENTERPRISE CENTER GMBH
AND WEST PUBLISHING CORPORATION'S NOTICE OF ERRATA
FOR THE DEPOSITION OF ISABELLE MOULINIER**

I, the undersigned, do hereby declare that I read the deposition transcript of Isabelle

Moulinier dated July 1, 2022 and that to the best of my knowledge, said testimony is true and

accurate, with the exception of the following changes listed below:

Page	Line	Original Text	Replacement Text	Reason
8	10	other hand per the e-mail address.	other hand per the e-mail we sent.	Transcription error
15	9	different types of contents.	different types of content.	Transcription error
16	11	for the full text of the opinion	and the full text of the opinion	Transcription error
18	2	different types of questions that might enter.	different types of questions that might be entered.	Transcription error
19	4-5	WIN is natural -- WIN queries. West Is Natural type of...	WIN, Westlaw is natural, queries.	Transcription error
22	14	first-year search results	first layer search results	Transcription error
22	18-19	a feature called WIN Is Natural,	a feature called WIN, Westlaw Is Natural,	Transcription error

Page	Line	Original Text	Replacement Text	Reason
24	13-14	as well as our results that we get	as well as other results that we get	Transcription error
25	4	which is not related to WestSearch	which is not related to WestSearch Plus	Misspoke/clarification
28	13	and why my team	and while my team	Transcription error
35	3	In general term, yes	In general terms, yes	Transcription error
36	1	popular name	popular names	Transcription error
36	18	it's not our type that we want	it's not the type that we want	Transcription error
39	4	as a set of roles	as a set of rules	Transcription error
39	18	a case title, AVB	a case title, A v. B	Transcription error
39	19-20	AVBC, and AVBC is not a	A v. B C, and A v. B C is not a	Transcription error
39	22	AVB, but also	A v. B, but also	Transcription error
41	12	The way we define	The way we defined	Transcription error
42	3	in Thomson Reuters when	at Thomson Reuters when	Transcription error
47	13	the computer program, in a sense;	the computer programming sense;	Transcription error
49	13-14	headnotes, which on the display appear at the top of the page are	headnotes, which on the display appear at the top of the page, are	Transcription error
52	6	this result in addition to	these results in addition to	Transcription error
53	5-6	There may be one too many key number per headnote.	There may be one to many key numbers per headnote.	Transcription error
55	6	We have a site store	We have a side store	Transcription error
55	7	with headnote as the key numbers	with headnotes and the key numbers	Transcription error
58	2	of candidate	of candidates	Transcription error
58	13	find by citation.	found by citation.	Transcription error
58	20	other candidate	other candidates	Transcription error
59	19	and application truncates	and the application truncates	Transcription error
60	20	a fixed formula like WIN-add for	a fixed formula like WIN had for	Transcription error
60	23	that we judge top key numbers	that we judge to be the top key numbers	Transcription error/misspoke
61	17	algorithm	algorithms	Transcription error
61	20	not the measuring algorithm	not the learning algorithm	Transcription error

Page	Line	Original Text	Replacement Text	Reason
63	6	That's the one that was one algorithm	That's the one – that was one algorithm	Transcription error
69	13-14	combination of entity	combination of entities	Transcription error
71	12	that are relating to	that relate to	Transcription error
73	19-21	We had a team of product managers who work on Westlaw as well as contractors I believe identify legal topic	We had a team of product managers who work on Westlaw, as well as contractors, I believe, identify legal topic	Punctuation
74	1	returned as those are very responsive documents. Those	returned as: those are very responsive documents; those	Punctuation
74	6-9	and we add a general topic as well as a smaller version of the topic. We add a list of documents that add grade. We also add a list of key numbers that add grade	and we had a general topic as well as a smaller version of the topic. We had a list of documents that had grades. We also had a list of key numbers that had grades	Transcription error
76	6	with customers had	with customers, had	Transcription error
77	2	focused on opinion	focused on opinions	Transcription error
77	14	Edge apart from WestSearch is Westlaw Next	Edge apart from WestSearch Plus is Westlaw Next	Misspoke/clarification
78	16-17	have a new version of the feature either this year for release or trains at the end of last year	have a new version of the feature trained either this year for release or at the end of last year	Missoke/clarification
79	14	assembled by SME;	assembled by SMEs;	Transcription error
81	12	add features based	had features based	Transcription error
82	12	example's	examples	Transcription error
83	1	SVM's	SVMs and	Transcription error/clarification
83	4	and feature value	and feature values	Transcription error
83	15	I add a document	I had a document	Transcription error
84	6	values with the weights	values with weights	Transcription error
84	20	machinery	machine learning	Transcription error
91	6	people name	names of people	Clarification

Page	Line	Original Text	Replacement Text	Reason
93	17-18	by the algorithm by the solution builder or the scientist	by the algorithm, by the solution builder, or the scientist	Punctuation
93	22	have the property of being able to end all categorical	have the property of being able to handle categorical	Transcription error
94	16	on a document or a documents-only	and documents	Transcription error
97	1	at least headnote data	at least on headnote data	Transcription error
98	18	vectoral	vectorial	Transcription error
99	24	machining	maching learning	Transcription error
105	1	acquiring and refine the data and that data is fit	acquiring and refining the data to be fit	Transcription error/misspoke
106	13-14	not 10 thousands	not tens of thousands	Transcription error
108	24	10 thousand	tens of thousands	Transcription error
116	19	Only of name	Only by name	Transcription error
116	20	IBM Community Services	IBM API Services	Misspoke/clarification
119	5-7	identifying phrases and synonyms potentially or related term and run against the indices	identifying phrases, and synonyms potentially, or related terms, and running them against the indices	Transcription error
119	22	documents that's	document that is	Transcription error
120	2	more likely	more like this	Transcription error
120	21	more likely search	more like this search	Transcription error
123	14	expended list	expanded list	Transcription error
125	24-25	text presumption and burden of proof	text "presumption and burden of proof "	Transcription error
127	6	function compare	function compares	Transcription error
130	14	organize	organizes	Transcription error
130	18	first tool that people can go to a manual search engine	first tool that people can go to, a manual search engine,	Punctuation
132	2	the tech nodes	the top nodes	Transcription error
136	8	product trace	product release	Transcription error
138	21	viables	variables	Transcription error

Dated: August 19, 2022

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Isabelle Moulinier